

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A bond separation inspection method comprising:

~~a step of joining together two members with an adhesive;~~

~~a step of embedding a sensor part of an optical fiber sensor in the adhesive;~~

~~a step of introducing light from a light source into one end of the optical fiber sensor and causing light from the sensor part to emerge from another end of the optical fiber sensor; and~~

~~a step of detecting separation of the bond of the two members on the basis of an optical characteristic of the light from the sensor part,~~

wherein ~~the step of embedding the sensor part in the adhesive includes causing a compressive thermal strain to arise in the sensor part due to different thermal expansivities of the adhesive and the sensor part so a refractive index period of the sensor part is sufficiently reduced such that a wavelength of reflected light emerging from the another end of the optical fiber caused by a bond separation is separated from a wavelength of reflected light caused inherently by the sensor part.~~

2. (Currently Amended) ~~A~~The bond separation inspection method according to claim 1, wherein ~~a step of causing a~~the compressive strain in the sensor part ~~is carried out by~~comprises using a thermo-setting adhesive as the adhesive and hardening the adhesive at a temperature higher than room temperature and then returning it to room temperature.

3. (Currently Amended) AThe bond separation inspection method according to claim 1, wherein the optical fiber sensor is an optical fiber grating sensor.

4. (Currently Amended) AThe bond separation inspection method according to claim 1, wherein the light source is a broadband light source.

5. (Currently Amended) AThe bond separation inspection method according to claim 1, wherein the optical characteristic is an optical characteristic of reflected light reflected in the sensor part.

6. (Currently Amended) AThe bond separation inspection method according to claim 1, wherein the optical characteristic is an optical characteristic of transmitted light passing through the sensor part.

7. (Currently Amended) AThe bond separation inspection method according to claim 5, wherein the optical characteristic of the reflected light is a spectrum characteristic of the reflected light.

8. (Currently Amended) AThe bond separation inspection method according to claim 5, wherein the optical characteristic of the reflected light is a strength characteristic of the reflected light at a predetermined wavelength.

9. (Currently Amended) AThe bond separation inspection method according to claim 6, wherein the optical characteristic of the transmitted light is a spectrum characteristic of the transmitted light.

10. (Currently Amended) ~~A~~The bond separation inspection method according to claim 6, wherein the optical characteristic of transmitted light is a strength characteristic of the transmitted light at a predetermined wavelength.

11. (Currently Amended) ~~A~~The bond separation inspection method according to claim 1, further comprising:

- ~~a step of joining together two members with an adhesive;~~
- ~~a step of embedding a sensor part of an optical fiber sensor in the adhesive;~~
- ~~a step of introducing light from a light source into one end of the optical fiber sensor and causing light from the sensor part to emerge from another end of the optical fiber sensor; and~~
- ~~a step of detecting separation of the bond of the two members on the basis of an optical characteristic of the light from the sensor part,~~
- ~~further comprising a step of applying a predetermined load to the two members.~~

12. (Currently Amended) ~~A~~The bond separation inspection method according to claim 11, wherein the predetermined load is a load applied to the two members in a direction such that it tends to increase any separation of the bond.

13. (Currently Amended) ~~A~~The bond separation inspection method according to claim 11, wherein ~~the step of applying a~~the load ~~is a step of comprises~~ applying external forces which deform the two members elastically.

14-23. (Canceled)

24. (New) The bond separation inspection method according to claim 1, wherein the refractive index period is reduced by at least 50% caused by the thermal compressive strain.